

**SUMMARY OF NOSB MATERIALS VOTED UPON AT  
ROHNERT PARK, CA; ORLANDO, FL; AUSTIN, TX; AND INDIANAPOLIS, IN**

**Key:**

**Rohnert Park, CA = R**

**Orlando, FL = O**

**Austin, TX = A**

**Indianapolis, IN = I**

**PROCESSING**

1. The following materials have been determined to be non-synthetic and allowed for organic processing:

**Agar-Agar = O**

**Alginic Acid = O**

**Calcium Carbonate = A**

**Calcium Chloride = O**

**Carrageenan = O**

**Citric Acid** - Must be produced by microbial fermentation of carbohydrate substrates.= **O**

**Cornstarch (Native) = A**

**Cultures, Dairy** - Bacteria may not be a product of rDNA technology. = **A**

**Diatomaceous Earth** - For food filtering aid only. = **O**

**Fruit Waxes (Plant-derived)** - Restricted to carnauba and wood-resin. = **I**

**Gums (Water Extracted Only - Arabic, guar, locust bean, and carob bean) = A**

**Kaolin & Bentonite = O**

**Kelp** - Allowed for use as a thickener and dietary supplement (as defined in the CFR).=**O**

**Lactic Acid = O**

**Lecithin (Unbleached) = O**

**Magnesium Sulfate = O**

**Natural Bacterial Enzymes** - (Enzymes that are produced by microorganisms that are products of recombinant DNA technology are synthetic and are prohibited unless specifically allowed. Synthetic bacterial enzymes must be petitioned by the manufacturer or processor.) = **O**

**Nitrogen** - Oil-free grades; from non-oil source. = **O**

**Oxygen** - Oil-free grades; from non-oil source. = **O**

**Pectin (High Methoxy) = O**

**Perlite** - Allowed as a filter aid in food processing. = **I**

**Potassium Chloride = O**

**Potassium Iodide = O**

**Sodium Carbonates & Bicarbonates = O**

**Yeast, Autolysate** - Yeast (used for source) that is a product of rDNA technology is prohibited. = **A**

**Yeast, Bakers** - Yeast (used for source) that is a product of rDNA technology is prohibited. = **A**

**Yeast, Brewers** - Yeast (used for source) that is a product of rDNA technology is prohibited. = **A**

**Yeast, Nutritional** - Yeast (used for source) that is a product of rDNA technology is prohibited. Growth on petrochemical substrates and sulfite waste liquor is also prohibited. = **A**

**Yeast, Smoked** - Yeast (used for source) that is a product of rDNA technology is prohibited. Growth on petrochemical substrates and sulfite waste liquor is also prohibited. The handler must document in the Organic Handling Plan that the smoke flavoring used is produced using a non-synthetic process that does not use synthetic processing aids or additives. = **A**

2. The following materials have been determined to be synthetic and allowed for organic processing:

**Alginates** = **O**

**Ammonium Carbonates & Bicarbonates** - Limited to use as a leavening agent. = **O**

**Ascorbic Acid** = **O**

**Calcium Citrate** = **A**

**Calcium Hydroxide** = **O**

**Calcium Phosphates (Di, Tri, Mono)** = **A**

**Carbon Dioxide** = **A**

**Chlorine Bleach (Calcium hypochlorite, sodium hypochlorite, chlorine dioxide)** - Allowed for disinfecting and sanitizing food contact surfaces. Residual chlorine levels for washwater in direct crop or food contact and in flush water from cleaning irrigation systems that is applied to crops or fields cannot exceed the maximum residual disinfectant limit under the Safe Drinking Water Act (currently 4mg/L expressed as Cl<sub>2</sub>). This substance is to be reviewed again in two years. = **A**

**Ethylene** - For use as a ripening agent for bananas only. = **A**

**Ferrous Sulfate** - Allowed for iron fortification of foods that is required by regulation or for iron enrichment by professional recommendation. = **O**

**Glycerin** - Must be produced by hydrolysis of fats and oils. = **A**

**Hydrogen Peroxide** = **A**

**Lecithin (Bleached)** = **O**

**Magnesium Chloride** - Allowable only if extracted from sea water. Magnesium chloride produced by synthetic processes (e.g., hydrochloric acid reaction) is not allowable. Unrefined non-synthetic magnesium chloride (nigari) is not recognized by FDA as an allowed food ingredient. = **A**

**Mono & Diglycerides** - For use in drum drying of food only. = **O**

**Nutrient Vitamins and Minerals** - Allowed for use in organic foods for enrichment or

fortification when required by regulation or recommended by an independent professional organization. = **A**

**Ozone** = **A**

**Pectin (Low Methoxy)** = **O**

**Potassium Acid Tartrate (or Potassium Tartrate made from Tartaric Acid)** = **A**

**Potassium Carbonate** - Allowed only for FDA-approved applications where natural sodium carbonate is not an acceptable substitute. = **O**

**Potassium Citrate** = **O**

**Potassium Hydroxide** - Prohibited for use in lye peeling of fruits and vegetables and where non-synthetic sodium carbonate is an acceptable substitute. = **A**

**Silicon Dioxide** = **I**

**Sodium Citrate** = **O**

**Sodium Hydroxide** - Prohibited for use in lye peeling of fruits and vegetables and where the non-synthetic sodium carbonate is an acceptable substitute. = **O**

**Sodium Phosphates** - Use restricted to dairy foods. = **A**

**Sulfur Dioxide** - For use in organic wine only; may not be added to wine at levels greater than 100 ppm; the level of free sulfites may not exceed 35 ppm in the final product. = **O**

**Tocopherols** - Must be derived from vegetable oil when rosemary extracts are not a suitable alternative. = **A**

**Xanthan Gum** = **O**

3. The following materials have been determined to be synthetic and unacceptable for use in organic foods, but acceptable for use in the food category, "made with organic ingredients":

**Magnesium Carbonate** = **I**

**Magnesium Stearate** = **A**

**Potassium Iodide** = **O**

**Potassium Phosphate** = **O**

4. The following materials have been determined to be synthetic and unacceptable for use in organic foods and unacceptable for use in the food category, "made with organic ingredients":

**Ammonium Phosphate** = **A**

**Calcium Sulfate** = **I**

**Chymosin (Microbial Rennet: bio-engineered form)** = **I**

**Colloidal Silica** = **A**

**Magnesium Silicate** = **A**

**Nisin** = **A**

**Sodium Tartrate** = **A**

**Sorbic Acid** = **A**

**Sulfuric Acid** = **I**

5. The following materials have been determined to be non-synthetic and unacceptable for use in organic food processing:

**Non-organically Produced Malted Barley (Permitted from an organic source only) . = I**

**Non-organically Produced Whey Protein (Permitted from an organic source only) . = I**

6. The following materials have been tabled by the NOSB:

**Clay (Fuller's Earth, Attapulgate) = I**

**Enzymes: Mold, fungal, yeast, plant, animal (including rennet), = I**

**Fruit Waxes (Animal waxes) = I**

**Magnesium Carbonate (non-synthetic form) = I**

**Unmodified Starches = A**

7. Other:

**Baking Powder (Aluminum Free) - All of the individual components of this material have been approved by the NOSB for use in organic food processing. = A**

## **CROPS**

1. The following materials have been determined to be synthetic and allowed for use in organic crop production:

**Alcohol (Ethanol)** - Permitted for use as a disinfectant. = **A**

**Alcohol (Isopropyl)** - Permitted for use as a disinfectant. = **A**

**Ammonium Carbonate** - For use as bait in insect traps only. Cannot be in direct contact with crop or soil. = **A**

**Ammonium Soaps** - Cannot come in contact with soil or edible portion of crop; to be used as an animal repellent only. = **I**

**Antibiotics (Streptomycin sulfate)** - Permitted for use as a fire blight control in apples and pears only. To be reviewed again in two years. = **A**

**Antibiotics (Terramycin)** - (Oxytetracycline calcium complex) To be reviewed again in two years. = **A**

**Aquatic Plant Extracts (Other than hydrolyzed)** - Extraction process is limited to the use of potassium hydroxide and sodium hydroxide. The amount of the solvent used is not to exceed the amount necessary for extraction. = **A**

**Bordeaux Mixes (Copper Sulfate and Hydrated Lime)** - Must be used in a manner that minimizes accumulation of copper in the soil. = **O**

**Boric Acid** - May be used for structural pest control. No direct contact with food or crops being certified. = **O**

**Chlorine Bleach (Calcium hypochlorite, sodium hypochlorite, chlorine dioxide)** - Acceptable for cleaning irrigation systems. Allowed for disinfecting and sanitizing food contact surfaces. Residual chlorine levels for washwater in direct contact with crops or food, and in flush water from cleaning irrigation systems that is applied to crops or fields cannot exceed the maximum residual disinfectant limit under the Safe Drinking Water Act (currently 4mg/L expressed as  $\text{Cl}_2$ ). This substance is to be reviewed again in two years. = **A**

**Coppers, Fixed** - May be used for disease control. May not be used as an herbicide. Shall be used in a manner that prevents excessive copper accumulation in the soil. Includes copper products that are exempt from EPA tolerance. = **A**

**Fish Products** - Liquid fish products can be pH adjusted using sulfuric, citric, or phosphoric acids. The amount of acid used cannot exceed the minimum amount needed to lower the pH to 3.5. = **O**

**Humic Acids (from water and alkali extracts or naturally occurring deposits)** = **I**

**Hydrogen Peroxide** = **A**

**Lignin Sulfonate** - Allowed for use with micronutrients and macronutrients and as a chelating agent. Also allowed for use as a dust suppressant and a floatation agent. = **A**

**Lime Sulfur** - Restricted to application as a fungicide or an insecticide if no feasible alternative exists. = **O**

**Magnesium Sulfate** - Allowed for use as a soil amendment with a documented magnesium deficiency. = **A**

**Micronutrients** - Use restricted to cases where soil/plant nutrient deficiency is documented by soil or tissue testing. Those made from nitrates are not allowed; those made from chlorides are not allowed; not to be used as a defoliant, herbicide, or desiccant. = **O**

**Newspaper Mulch** - Glossy paper and colored ink paper is prohibited. = **A**

**Oils, Petroleum Based** - Allowed on woody plants for dormant and summer pest control. Prohibited for weed control use. = **O**

**Petroleum Distillates** - Restricted to petroleum derivatives with a 50% boiling point at 10mm mercury pressure between 415 degrees F° and 440 degrees F°, ± 8 degrees F°. Aromatic petroleum solvents including, but not limited to, benzene, naphthalene, toluene and xylene are prohibited. Allowed for use in organic production as suffocating or stylet oils on foliage and as inert ingredients. May be applied to dormant perennials. Direct application to harvested crop is prohibited. Petroleum distillates may not be used as either weed or carrot oils in organic production. Land covered with petroleum derived pavement and road oils cannot be certified organic for 3 years following application. = **A**

**Pheromones** = **O**

**Plastic Mulch and Covers [Petroleum based; other than poly-vinyl chloride (PVC)]** - PVC is prohibited. Petroleum based plastics other than PVC are acceptable. Restricted by OFPA as having to be removed at the end of each growing or harvest season; also, shall not be incorporated into the soil or left in the field to decompose. = **A**

**Soaps, Insecticidal** = **O**

**Soap-based Algicides/demossers** = **I**

**Soap-based Herbicides** - Allowed for use around buildings, on roadways, ditches, right-of-ways, and ornamental crops. = **I**

**Sodium Silicate** - Allowed for floating tree fruits and fiber processing. = **I**

**Sulfur (elemental)** = **O**

**Sulfur Dioxide** - Allowed for use in sulfur smoke bombs for control of underground rodents. = **I**

**Sticky Traps and Barriers** = **A**

**Vitamins B1, C, and E** = **A**

**Vitamin D3** - Permitted as a rodenticide. = **A**

2. The following materials have been determined to be synthetic and unacceptable for use in organic crop production:

**Antibiotics (Avermectin)** = **A**

**Arsenate Treated Lumber** - Effective on the publication date of the final rule, the use of arsenate (and other prohibited materials) treated lumber is prohibited for new construction and replacement purposes. Certification applicants shall provide records to the certifying agent that arsenate (and other prohibited materials) treated lumber was not installed within 36 months immediately preceding the initial harvest date of any organic agricultural products. In no case shall arsenate (and other prohibited materials) treated lumber be allowed in installations in contact with the soil and used to grow vegetables (soil beds). = **A**

**Gypsum By-Product (From flue trappings and fertilizer manufacture)** = **A**

**Gypsum By-Product (From drywall manufacture) = A**  
**Killed Microbial Pesticide ( *Pseudomonas fluorescens with Bt gene*) = A**  
**Leather By-Product = A**  
**Nicotine = O**  
**Potassium Nitrate (Niter) = A**  
**Sewage Sludge = I**  
**Sodium Chlorate = I**  
**Sodium Fluoroaluminate (Non-mined) = I**

3. The following materials have been determined to be non-synthetic and recommended for placement on the Prohibited Naturals List:

**Ash (from manure burning) = O**  
**Sodium Fluoroaluminate (Mined) = I**  
**Strychnine = O**  
**Tobacco Dust = O**

4. The following materials have been determined to be non-synthetic and not within the scope of the National List:

**Ash (from the combustion of biologically derived materials) = O**  
**Calcium chloride (Extracted from brine) -** Allowed for use to correct bitter pit problems in apples and allowed for use only in organic cotton production to comply with emergency spray programs or to prevent immediate loss of crop. = **I**  
**Gibberellic Acid -** Must be produced from fermentation of non-genetically engineered organisms. = **I**  
**Gypsum By-Product (Mined Source) = A**  
**Hydrolyzed Aquatic Plant Extracts = O**  
**Magnesium Chloride (Extracted from brine, seawater, and salt deposits) = I**  
**Potassium Chloride (Muriate of Potash) -** Only the mined source is considered non-synthetic. Any use shall be in a manner that prevents excessive chloride accumulation in soils. Soil testing may be required in both treated and untreated adjacent soils to verify absence of chloride build-up. = **A**  
**Sodium Bicarbonate = A**  
**Sodium Chloride -** Allowed for use only in organic cotton production to comply with emergency spray programs or to prevent immediate loss of crop. = **I**  
**Sodium Nitrate (Mined) -** See the NOSB Final Recommendations Addendum Number 27 for the Chilean Nitrate Special Use Guidelines. = **O**

5. The following materials have been tabled by the NOSB:

**Amino Acids = I**  
**Ash (from coal burning) = O**

**Pelargonic acid = I**  
**Potassium Bicarbonate = O**  
**Potassium Permanganate = A**

6. Botanical pesticides. See the NOSB Final Recommendations Addendum Number 2 for the Botanical Pesticides Policy and use guidelines.

**Neem** - Motion to add to the Prohibited Naturals List was defeated. = **R**  
**Pyrethrums** - Motion to add to the Prohibited Naturals List was defeated. = **R**  
**Quassia** - Removed from consideration. = **R**  
**Rotenone** - Motion to add to the Prohibited Naturals List was defeated. = **R**  
**Ryania** - Motion to add to the Prohibited Naturals List was defeated.= **R**  
**Sabadilla** - Motion to add to the Prohibited Naturals List was defeated. = **R**  
**Piperonyl Butoxide** - Motion to add to the Allowed Synthetics list as a synergist for use with botanicals was defeated. = **R**

## **LIVESTOCK**

1. The following materials have been determined to be synthetic and allowed for use in organic livestock production:

**Alcohol (Ethanol)** - Allowed for use in medical treatments and as a disinfectant. Prohibited for use as a feed additive. = **A**  
**Alcohol (Isopropyl)** - Approved for use only as a disinfectant. = **A**  
**Aspirin**- Approved for health-care use to reduce inflammation. = **O**  
**Chlorine Bleach (Calcium hypochlorite, sodium hypochlorite, chlorine dioxide)** - Allowed for disinfecting livestock facilities and sanitizing food contact surfaces. Residual chlorine levels for washwater in direct contact with crops or food, and in flush water from cleaning irrigation systems that is applied to crops or fields cannot exceed the maximum residual disinfectant limit under the Safe Drinking Water Act (currently 4mg/L expressed as Cl<sub>2</sub>). This substance is to be reviewed again in two years. = **A**  
**Copper Sulfate** - For topical use or as an essential nutrient. = **A**  
**Electrolytes** - May not contain antibiotics. = **A**  
**Glucose** = **A**  
**Hydrated Lime (Calcium Hydroxide)** - Not permitted for soil application or to cauterize mutilations or deodorize animal wastes. = **A**  
**Iodine** = **O**  
**Local Anesthetics (Lidocaine and Procaine only)** - Use requires a withdrawal period of 90 days in livestock intended for slaughter and 7 days in dairy animals. = **A**  
**Magnesium Sulfate** = **A**  
**Milk Replacers** - Emergency use only when fresh milk is not available. Milk replacers based on non-milk products or from BST treated animals are not permitted. No antibiotics may be added. Milk from certified organic animals is preferred. = **A**



**Mineral Oil** - For topical use and as a lubricant. = **A**

**Nutrient Vitamins and Minerals** - Limited to those approved by the Food and Drug Administration for livestock use. = **A**

**Oxytocin** - No routine or long term use. May be used only when necessary to allow an animal to let down milk during first few days of lactation and also for other approved veterinary uses. = **A**

2. The following materials have been determined to be non-synthetic and not within the scope of the National List:

**Alcohol (Derived from fermentation)** = **A**

**Colostrum Whey** - No colostrum from rBST treated animals allowed. = **I**

**Probiotics** = **A**

3. The following materials have been tabled by the NOSB:

**Alcohol (Methanol)** = **A**

**Biotin** = **O**

**Brewery Wastes (As a feed supplement)** = **A**

**Colostrum Whey Antibodies** = **A**